

**Comments of the Natural Resources Defense Council (NRDC)
on the
2005 Integrated Energy Policy Report Staff Paper “A Preliminary Environmental Profile of
California’s Imported Electricity”**

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NRDC appreciates the opportunity to offer these comments on the California Energy Commission’s (CEC) Staff Paper “A Preliminary Environmental Profile of California’s Imported Electricity.” NRDC is a non-profit membership organization with a long-standing interest in minimizing the societal costs of the reliable energy services that Californians demand. We focus on representing our more than 110,000 California members’ interest in receiving affordable energy services and reducing the environmental impact of California’s electricity consumption.

NRDC commends CEC staff for investigating the environmental impacts of California’s imported electricity. While NRDC is concerned about the environmental impacts of in-state electricity production as well, we focus our comments on the Staff Report on out-of-state power because it is a relatively new area of inquiry for the Commission and it represents a major area of pollution caused by California that has often been largely unrecognized by Californians.

The Staff Report is an extremely valuable start to enable California to begin taking full responsibility for the environmental impact of its electricity consumption. We urge the Commission to make this information on California’s imported electricity a central part of the *Electricity Environmental Performance Report* (EEPR) this year and in future IEPR updates. With this new information, the EEPR will be able to provide a complete picture of the environmental impact associated with California’s electricity system. Over time, we urge the Commission to continue to build its analysis of imported electricity, so that California has both a historical record as well as future projections.

The comparison of various technologies’ emissions rates will help California determine the desirability of investing in different types of new power plants.

NRDC commends the Commission for assembling Table 2-4 with information on the emission rates of various technologies. We suggest that the Commission expand this table to also look at the emission rates of existing technologies, so that policy-makers can compare the emissions associated with existing versus new technologies. We also urge the Commission to include simple-cycle natural gas plants in the table.

The Commission should model the environmental impact of various scenarios of future electricity imports and the impact on California's ability to meet Governor Schwarzenegger's greenhouse gas (GHG) emission reduction goals.

The Staff Report provides helpful information about the various power plants proposed and under development throughout the West. Many of these plants hope to sell their power to California. The Commission should model various scenarios of future electricity imports to California and their environmental consequences, including the impact on California's ability to meet Governor Schwarzenegger's GHG emission reduction goals. In particular, the Commission should model the impact on GHG emissions if California were to make new commitments to out-of-state conventional coal plants.

The section on Recently Enacted and Proposed Regulations for Air Quality should include the proposed acts in Congress to regulate greenhouse gas pollution.

There are several bills pending before Congress that would regulate GHG emissions and have a significant impact on California's electricity system; this includes S.342 and H.R.759, Climate Stewardship Act of 2005; S.150, Clean Power Act of 2005; H.R.1451, Clean Smokestacks Act of 2005; and H.R.1873, Clean Air Planning Act of 2005. And just recently, in June, the U.S. Senate passed a Sense of the Senate Resolution declaring that mandatory emission limits are required to reduce the pollution that causes global warming.

Transmission losses should be considered in looking at the environmental impact of imported electricity.

Electricity imported into California is often transmitted over long distances, resulting in losses over the transmission lines. With sizeable distances these losses can be significant. We suggest that the Staff Report examine to what extent the transmission losses increase the pollution per unit of delivered electricity associated with imported electricity.

NRDC urges the Commission to expand the analysis of IGCC and carbon capture and sequestration technologies.

NRDC commends the staff for including IGCC in the analysis of different generation technologies. IGCC plants are a relatively newer technology for the electric industry and hold significant potential for reducing GHG emissions from coal plants through carbon capture and sequestration. Since new IGCC plants have been proposed in the West, we urge the Commission to expand its analysis of this technology. In addition, we urge the Commission to expand its analysis carbon capture and sequestration. We note that this technology is not only in the "research and development" stage as stated in the Staff Report. (p. 12) Sequestration has been demonstrated for CO₂ storage projects and has also been practiced commercially in enhanced oil recovery projects for many years.¹ Given the potential importance of this technology for

¹ Herzog, H.J. and D. Golomb, "Carbon Capture and Storage from Fossil Fuel Use," in C.J. Cleveland (ed.), *Encyclopedia of Energy*, Elsevier Science Inc., New York, pp 277-287, (2004). Available at <http://sequestration.mit.edu/bibliography/index.html>. Several companies have experience with carbon sequestration.

meeting GHG reduction goals, we urge the Commission to provide more information on its performance and economics.

NRDC urges the Commission to clarify what percent of electricity consumed in California is coal-fired.

The Staff Report states that 31% of the electricity consumed in California is coal-fired (p. 2), but also states that total imports represent 31%. (p. 5) Since imports include power generated from multiple technologies, we urge the Commission to clarify these percentages.

NRDC urges the Commission to refine its estimates of the sources of imported power.

The Staff Report assumes that generation imported into California has the same resource mix as the Western states. (p. 28) While we understand that it can be difficult to trace imports, we urge the Commission to refine its estimates of the sources of imported power as much as possible to accurately reflect the environmental impact of California's imports. In addition, we urge the Commission to clarify Figures 3-3 through 3-10; it is currently unclear precisely what each graph represents. For example, are "out-of-state" emissions from all power generated in the entire West or some subset of that? We expect that these graphs will be very useful once the report clarifies how to interpret them.

In conclusion, we commend the Commission staff for tackling the challenging issue of the environmental impact of California's electricity imports. We urge the Commission to make this report a central part of this year's and future EEPs.

See for example, www.bp.com/sectiongenericarticle.do?categoryId=9002452&contentId=7004722, and www.pewclimate.org/what_s_being_done/in_the_business_community/sequestration.cfm.